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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,004	12/29/2000	Lakshminarayanan Venkataraman	081862.P224	9829

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EXAMINER

PHUNKULH, BOB A

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 08/03/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,004

Applicant(s)

VENKATARAMAN ET AL.

Examiner

Bob A. Phunkulh

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-16, 18-20, 26-46 and 48-58 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 17, 21-25 and 47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 19, 51 are objected to because of the following informalities: if the subject matter "a second message" cited in claim 19 line 4 is the same message in line 2 please correct the subject matter to --the second message--; if the subject matter "a third message" cited in line 4 is the same message in claim 51 line 2 please correct the subject matter to --the third message--. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 37-43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Data structures (an inter-nodal message) not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. See MPEP 2106.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-15, 18-20, 26-30, 32-36, 45, 48, -55, 57-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Admitted Prior Art (pages 1-4), hereinafter APA.

Regarding claim 1, APA discloses a method comprising:

at least one clearing of a plurality of first connections between a first node and a second node of an ATM network from the first node; and

for each said clearing, sending a first message (RELEASE message) from the first node to the second containing an identification of the first connections (*an ATM network typically provides a number of interconnected nodes which receive data from network nodes and forward that data through other network nodes to an ultimate destination. In general, a node includes a plurality of ports that are coupled to at least one input and output line, each port connecting the node to another node of the network, and allowing for the routing of data between the connecting nodes. In order to clear a Virtual Channel, the ATM Forum prior art provides a message called RELEASE and a corresponding message called RELEASE COMPLETE. Well known to those skilled in the art, the RELEASE and the RELEASE COMPLETE message are each transmitted along the signaling channel between connecting nodes, see page 1*).

Regarding claim 2, APA discloses receiving the first message at the second node; clearing the first connections from the second node in response to the received first message; and sending a single second message (RELEASE COMPLETE message) from the second node to the first node in response to at least one of clearing the first connections from the second node and receiving the first message identifying at least one of the connections cleared in response to the received first message, and the first message (*In order to clear a Virtual Channel, the ATM Forum prior art provides a message called RELEASE and a corresponding message called RELEASE COMPLETE. Well known to those skilled in the art, the RELEASE and the RELEASE COMPLETE message are each transmitted along the signaling channel between connecting nodes, pages 1 and 2*).

Regarding claim 3, the APA inherently discloses enabling an interpretation of the received first message wherein the clearing from the second node depends upon the enabling (enabling is inherent feature since the second node needs ability to identify the REALEASE message for the identified connection).

Regarding claim 6, APA discloses a method comprising:

receiving a first message by a first node of an ATM network from a second node of the ATM network connected to the first node by at least one first connections;

clearing the first connections from the second node in response to receiving the first message; and

sending a second message from the first node to the second node identifying at least one of the first connections cleared from the second node and the first message
(an ATM network typically provides a number of interconnected nodes which receive data from network nodes and forward that data through other network nodes to an ultimate destination. In general, a node includes a plurality of ports that are coupled to at least one input and output line, each port connecting the node to another node of the network, and allowing for the routing of data between the connecting nodes. In order to clear a Virtual Channel, the ATM Forum prior art provides a message called RELEASE and a corresponding message called RELEASE COMPLETE. Well known to those skilled in the art, the RELEASE and the RELEASE COMPLETE message are each transmitted along the signaling channel between connecting nodes, see page 1).

Regarding claim 7, the APA inherently discloses enabling an interpretation of the

received first message wherein the clearing from the second node depends upon the enabling (enabling is inherent feature since the second node needs ability to identify the RELEASE message for the identified connection).

Regarding claim 8, the APPA discloses including clearing the first connections from the second node; and wherein the first message includes an identification of the first connections (see pages 1 and 2).

Regarding claim 9, the APA discloses a method of clearing a plural number of connections between a first node and a second node in an Asynchronous Transfer Mode network including:

sending at least one first message from the first node to the second node, each first message including an identification of at least one of

each of a plural number of first connections to be cleared from the second node by the first message, and

each of a plural number of first connections that is one of cleared from the first node and to be cleared from the first node (*(an ATM network typically provides a number of interconnected nodes which receive data from network nodes and forward that data through other network nodes to an ultimate destination. In general, a node includes a plurality of ports that are coupled to at least one input and output line, each port connecting the node to another node of the network, and allowing for the routing of data between the connecting nodes. In order to clear a Virtual Channel, the ATM Forum prior art provides a message called RELEASE*

and a corresponding message called RELEASE COMPLETE. Well known to those skilled in the art, the RELEASE and the RELEASE COMPLETE message are each transmitted along the signaling channel between connecting nodes, see page 1).

Regarding claim 10, the APA discloses for each said first message, clearing from the first node each said first connection(a first network node issues a separate RELEASE message for each connection, and transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node, see page 2).

Regarding claim 11, the APA discloses the first message is consistent with an Asynchronous Transfer Mode formatted message (*RELEASE message is consistent with the ATM format, see page 1).*

Regarding claim 12, the APA discloses enabling the first node to send the first message before the sending (gateway 102 is enable upon receiving the disconnect message from the calling party, see page 2).

Regarding claim 13, the APA discloses sending is in response to a requirement for a clearing of a plural number of first node connections (a first network node issues a separate RELEASE message for each connection, and

transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node, see page 2).

Regarding claim 14, the APA discloses sending is in response to an event that includes at least one of

- a received Physical interface reset command,
- a received Virtual interface reset command,
- a received Datalink Layer Service-Specific Connection-Oriented Protocol reset,
- a received Global path ATM Forum defined RESTART message,
- a received Virtual Path ATM Forum defined RESTART message,
- a received plural number of RELEASE messages, and
- a received Force Reroute in a Semi-Permanent Switched Virtual Circuit based

network (if a calling party (not shown) that is connected to gateway 102, chooses to initiate a disconnect process, the calling party transmits a disconnect message to gateway 102. Gateway 102 responds to the disconnect message by initiating a RELEASE message that is transmitted from gateway 102 across the pathway to gateway 110, which responds to the reception of the RELEASE message by transmitting to gateway 102 a corresponding RELEASE COMPLETE message for only that specific connection, page 2).

Regarding claim 15, the APA discloses the first message includes at least an identification of each of the first connections to be cleared from the second node, and further including:

the second node receiving the first message, and
the second node clearing each of the connections in the second node identified as to be cleared from the second node in the first message in response to receiving the first message (see pages 1 and 2).

Regarding claim 18, the APA inherently discloses enabling the second node to receive the first message before the receiving (in order to received the RELEASE message the second node must be enable).

Regarding claim 19, the APA discloses sending at least one of a second message to the first node identifying the connections cleared by the second node in response to the second node receiving the first message, and a second message to the first node identifying the first message received by the second node (the RELEASE COMPLETE message is sent from the second node to the first node in response to the RELEASE message, see pages 1 and 2).

Regarding claim 20, the APA inherently discloses enabling the second node to send the first message before the sending (in order to received the RELEASE message the second node must be enable).

Regarding claim 26, the APA inherently discloses enabling the first node to

send the second message before the sending (in order to received the RELEASE COMPLE message the first node must be enable).

Regarding claim 27, the APA discloses an Asynchronous Transfer Mode (ATM) node that includes a first circuit that generates an inter-nodal call control first message containing an identification of at least one of each of a plural number of first connections to be cleared at an ATM first node to be coupled to the ATM node, and each of a plural number of first connections that is one of cleared from the ATM node and to be cleared from the ATM node; and a second circuit to transmit the first message to the first node (see pages 1 and 2).

Regarding claim 28, the APA discloses a circuit to enable one of the generation of the first message and the transmission of the first message, in response to an input if the ATM node was disabled; and to disable the ATM node from one of the generation of the first message and the transmission of the first message in response to an input if the ATM node was enabled (see pages 1 and 2).

Regarding claim 29, the APA discloses a circuit to clear each of the first connections (see page 2).

Regarding claim 30, the APA discloses a circuit to receive a second message containing an identification of at least one of each of a plural number of second connections that is one of cleared from a first node and to be cleared from the first Node (the RELEASE COMPLETE message, see pages 1 and 2).

Regarding claim 32, the APA discloses a circuit to receive and interpret a second message from a coupled second node that contains an identification of a plural number of second connections; and a circuit to clear the second connections from the ATM node (see pages 1 and 2).

Regarding claim 33, the APA discloses a circuit to send a third message (RELEASE message) from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections cleared by the ATM node in response to the second message, and the second connections (see pages 1 and 2).

Regarding claim 34, the APA inherently discloses An Asynchronous Transfer Mode (ATM) node (gateway 110 receiving the RELEASE message from the gateway 102) that includes a first circuit to receive and interpret a first message from a first node (gateway 102) that contains an identification of a plural number of first connections; and a second circuit to clear the first connections from the ATM node (see pages 1 and 2)

Regarding claim 35, the APA inherently discloses a third circuit to send an ATM inter-nodal call control second message (the RELEASE COMPLETE message) from the ATM node to the first node that identifies a plural number of second connections, the second connections characterized by at least one of the connections cleared by the ATM node in response to the first message, and the first connections (see page 1 and 2).

Regarding claim 36, the APA inherently discloses a circuit to enable the first circuit to interpret the first message in response to an enabling input (see pages 1 and 2).

Regarding claim 44, the APA discloses a machine-readable medium that provides instructions, which when executed by at least one processor (inherent feature in the ATM first node), cause said processor to perform operations comprising preparing at least one first message to be sent from a first node of an ATM network to a second node of an ATM network, each first message including an identification of a first connections to be cleared from the second node by the first message (see page 1 and 2).

Regarding claim 45, the APA discloses for each said first message, clearing from the first node each said first connection (a first network node issues a separate RELEASE message for each connection, and transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node, **see page 2**).

Regarding claim 48, the APA discloses the first message is consistent with an Asynchronous Transfer Mode formatted message (see pages 1 and 2).

Regarding claim 49, the APA discloses interpreting a second message consistent with an Asynchronous Transfer Mode formatted message received from an ATM network node wherein the second message includes an identification of each of a plural number of connections to be cleared from the first node

Regarding claim 50, the APA discloses clearing each of the connections in the first node identified as to be cleared in the second message in response to interpreting the second message (a first network node issues a separate RELEASE message for each connection, and transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node. The second network node then initiates and transmits a corresponding RELEASE COMPLETE message as an acknowledge to the RELEASE message for that separate connection that is transmitted across the network to the first network node, see page 2).

Regarding claim 51, the APA discloses preparing at least one of a third message to the ATM network node identifying the connections cleared by the first node in response to the first node interpreting the second message, and a third message to the ATM network node identifying the second message received by the first node (the

first node transmit the next RELEASE to the second node, for the next connection need for release, and so on for the next connection).

Regarding claim 52, the APA discloses an Asynchronous Transfer Mode (ATM) node that includes means for generating an inter-nodal call control first message type that is to identify at least one of each of a plural number of first connections to be cleared at an ATM first node coupled to the ATM node, and each of a plural number of first connections that is one of cleared from the ATM node and to be cleared from the ATM node; and means for transmitting the first message to the first node (*well known to those skilled in the art, the RELEASE and the RELEASE COMPLETE message are each transmitted along the signaling channel between connecting nodes. A first network node issues a separate RELEASE message for each connection, and transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node. The second network node then initiates and transmits a corresponding RELEASE COMPLETE message as an acknowledge to the RELEASE message for that separate connection that is transmitted across the network to the first network node, see page 1 and 2*).

Regarding claim 53, the APA discloses means for enabling one of the generation of the first message and the transmission of the first message, in response to an input if the ATM node was disabled, and for disabling one of the generation of the first message and the transmission of the first message in response to an input if the first node was enabled (in order to received the RELEASE message the first node must be enable).

Regarding claim 54, the APA discloses means for clearing each of the first connections (a first network node issues a separate RELEASE message for each connection, and transmits the RELEASE message to connecting nodes for propagation along the network for eventual reception by a second network node, **see page 2 lines 2-7**).

Regarding claim 55, the APA discloses means for receiving a second message type containing an identification of at least one of each of a plural number of second connections in response to the first node receiving the first message type that is one of cleared from a second node and to be cleared from the second node (the RELEASE COMPLETE message is sent from the second node to the first node in response to the RELEASE message sent from the first node, **see page 2 lines 1-7**).

Regarding claim 57, the APA discloses means for receiving a first message type from a second node, the third message type containing an identification of a plural number of second connections; means for interpreting the received first message type; and means for clearing the second connections from the ATM node in response to the interpreting (see pages 1 and 2).

Regarding claim 58, the APA discloses means for sending a second message type from the ATM node to the second node that identifies a plural number of third connections, the third connections characterized by at least one of the connections

cleared by the ATM node in response to the interpreting, and the second connections (see pages 1 and 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 31, 46, 50, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Morris et al. (US 6275493), hereinafter Morris.

Regarding claims 16, 31, 46, 50, and 56, the APA fails to explicitly disclose ATM node includes a database of the first connections that are cleared from the ATM node, and a data base of the first connections that are cleared from the ATM node from which are deleted the second connections in the received second message type.

Morris, on the other hand, discloses ATM nodes, which include ATM switches and cross-connect apparatus, use routing tables to map VCI and VPI values received in an incoming cell to outgoing values used to select an outgoing link as a way of routing the associated cell through the ATM node.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made includes the teaching of Morris in the ATM nodes of APA for the table or database is essential part of the ATM communication for maintaining the VCI/VPI for active connections.

Allowable Subject Matter

Claims 4-5, 17, 21-25, 47, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any response to this action should be mailed to:

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or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

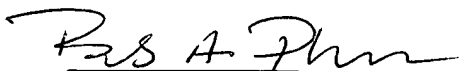
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(703) 308-8251**. The examiner can normally be reached on Monday-Friday from 8:00 A.M. to 4:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Douglas W. Olms**, can be reach on **(703) 305-4703**. The fax phone number for this group is **(703) 872-9314**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bob A. Phunkulh

A handwritten signature in black ink, appearing to read "Bob A. Phunkulh", written over a horizontal line.

TC 2600

Art Unit 2661

July 26, 2004